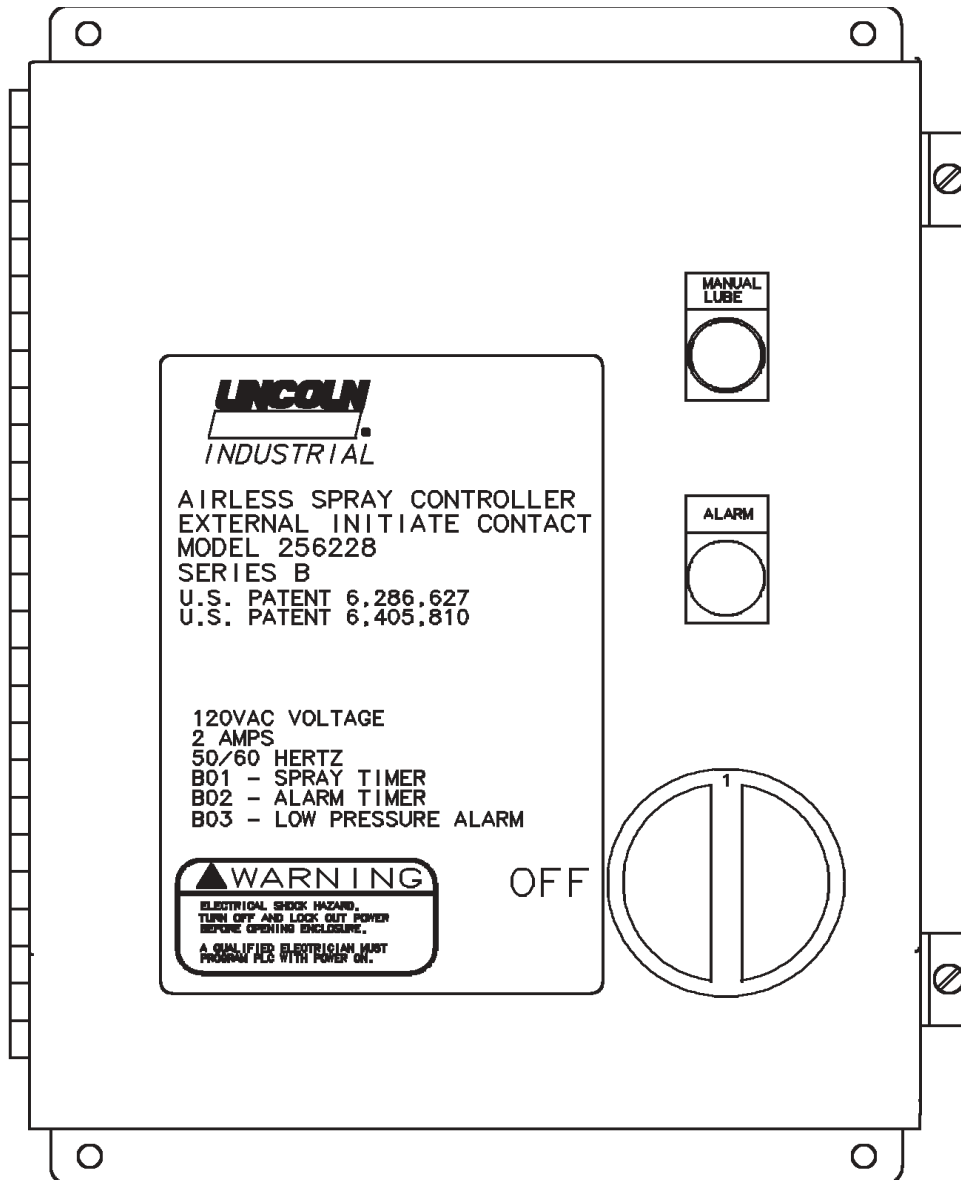


**Airless Spray Controller  
External Initiate Contact  
Model 256228  
Series "B"©**



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### WARNING

Electrical shock hazard. Turn off and lock out power before opening enclosure.

### WARNING

When changing timer values in the PLC the enclosure door is open with power on.  
This must be done by a qualified electrician.

## Specifications

Input Voltage.....	120 VAC 50/60 HZ
Current Consumption.....	2 Amps at 120 VAC (Less Alarm load)
Enclosure Rating.....	NEMA 12 Rating
Controller Ambient	
Temperature Range.....	32°F (0°C) to 131°F (55°C)
Net Weight.....	9 lbs (4 Kg)

## Description of Operation

- © 1. The air to pump solenoid will turn on when the pressure switch is closed, indicating low pressure, and the spray solenoid is de-energized. The Low Pressure Alarm Timer will begin to time out.
- © 2. The pump will turn on and build pressure in the lube supply line. When the pressure switch opens, indicating high pressure, the pump will turn off, the green ready light will turn on. If the pressure switch does not open before the Low Pressure Alarm Timer times out, the pump will turn off and an alarm will be indicated.
- 3. When the external initiate contact that is connected to terminals 11 and 12 closes, the solenoid will energize spraying the gear.
- 4. The spray solenoid will turn off when the spray timer times out and the pressure switch closes, indicating low pressure.

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5. When the spray solenoid turns off and the pressure switch closes, the cycle repeats itself.

- ©6. If the alarm timer B02 times out indicating a failure of the system to spray, causing the system to spray by clearing a clogged tip or refilling a reservoir will reset the alarm timer. The Low Pressure Alarm can only be reset by turning the system power off and back on.

## Features

Disconnect on door - Removes power from controller and lube system.

Manual Lube Push-button on door - Depressing push-button will initiate a lube cycle (ready light must be on).

Ready Light on door - Indicates that system is fully charged and manual lube can be depressed.

Alarm Light on Door - If the alarm timer times out, the alarm light on door will turn on. See section on alarms.

Prespray cycle - When power is turned on, the controller will wait two minutes and then initiate a spray cycle. The two minute wait will allow the heater to warm the lubricant. The pump must build pressure within two minutes to open the pressure switch before a prespray cycle can take place.

Adjustable Alarm Timer - The alarm timer should be set long enough to allow a spray event to take place. A spray event consists of spraying the lubricant and then the closing of the pressure switch. The closing of the pressure switch will reset the alarm timer. The alarm timer is activated by the closing of the External Initiate contact, the manual lube pushbutton located on the enclosure door or the prespray cycle. If a spray cycle doesn't take place within this alarm setting, the system will go into alarm. A 120VAC alarm signal is available.

Adjustable Spray Timer - Amount of time that the spray solenoid is energized. Adjustable from 1 second to 99 seconds.

- © Adjustable Low Pressure Alarm - Set to a time setting that is long enough for the system to recharge plus a safety factor of about 30 seconds. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.) When the Low Pressure Alarm Timer times out, the output for the pump solenoid will be turned off and the system will indicate an alarm condition. This timer will turn off the pump if a hose breaks, pump fails, low air pressure or lubricant reservoir is empty.

External Initiate Contact - The closing of this switch will initiate a spray event. This is a dry contact (no voltage) wired to terminals 11 and 12. The closing of this switch will also start the alarm timer B02.

## Alarm

There are two types of alarms.

### 1. General failure of the system to spray.

Timer B02 will track this type of alarm. The closing of the system pressure switch will reset the alarm timer preventing it from timing out. The alarm timer is set long enough to allow a spray event to take place. A spray event consists of

spraying the lubricant and then the closing of the pressure switch.

## 2. Low Pressure Alarm

This alarm indicates a failure of the system to build pressure.

The Low Pressure Alarm timer B03 should be set to the time required for the system to recharge plus a safety factor of about 30 seconds. To reset this type of alarm power must be turned off and then back on. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.)

### Alarm Light and External Signaling

The controller has an alarm light on the enclosure door and a 120 VAC alarm signal for external signaling. The alarm signal available at terminals 13 and 14 will signal the same as the light on the door.

Low Pressure Alarm: The alarm light on the enclosure door will turn on and the low pressure alarm can be confirmed by viewing the display on the front of the programmable controller. The output Q7 will be highlighted (with Q4) and the pump output will be turned off as shown below.

I: 1 2 3 4 5 6 7 8 9 10 11 12	Input Status Line (I1 highlighted indicating pressure switch closed)
SU 21:37	Day and Time
Q: 1 2 3 4 5 6 7 8	Output Status Line with Q4 & Q7 highlighted (turned On)

The alarm signal available at terminals 13 and 14 will signal the same as the light on the door

## Changing the Parameters for the “Spray” timer and the “Alarm” timers.

Changing the parameter for a timer only changes the time assigned to that timer. The time for the “Spray” timer is in seconds, the time for the “Alarm” timer is in minutes. When in the parameter mode, you cannot change or alter the program stored in the PLC. Changing the program can only be done in the programming mode.

Listed below are the three timers that can be viewed through the window on the PLC. Using the keys on the PLC you can change timers B01, B02 and B03.

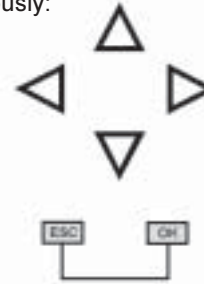
B01 - Spray timer

B02 - Alarm timer

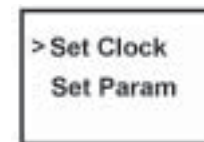
- © B03 - Low Pressure Alarm Timer. Should be set to the time required for the system to recharge fully plus about 30 seconds. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.)

## Procedure for Changing Timer Parameters

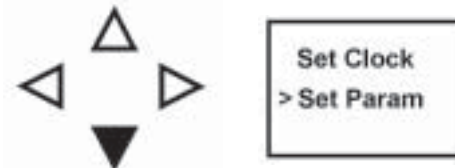
1. To switch to the parameter mode, press the ESC and OK keys simultaneously:



2. The PLC screen will change to the display shown below:



3. Select the “Set Param” option:
  - a) press the down arrow key
  - b) press the OK key



4. The PLC will display the timer parameters
  - a) press the up arrow key to view the three timers: B01, B02 and B03©.

<b>B01:T</b> <b>T= 03.00s</b> <b>T<sub>a</sub>=00.00s</b>	← Spray Timer ← Indicates 3 seconds spray time ← Indicates accumulated time
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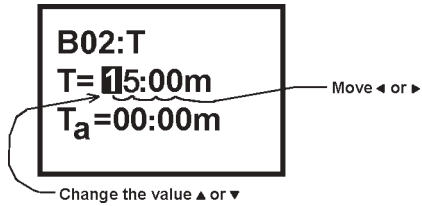
<b>B02:T</b> <b>T= 02:00m</b> <b>T<sub>a</sub>=00:00m</b>	← Alarm Timer ← Indicates 2 minutes before alarm ← Indicates accumulated time
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© <b>B03:T</b> <b>T= 01:00m</b> <b>T<sub>a</sub>=00:00m</b>	← Low Pressure Alarm Timer ← Indicates 1 minute before alarm ← Indicates accumulated time
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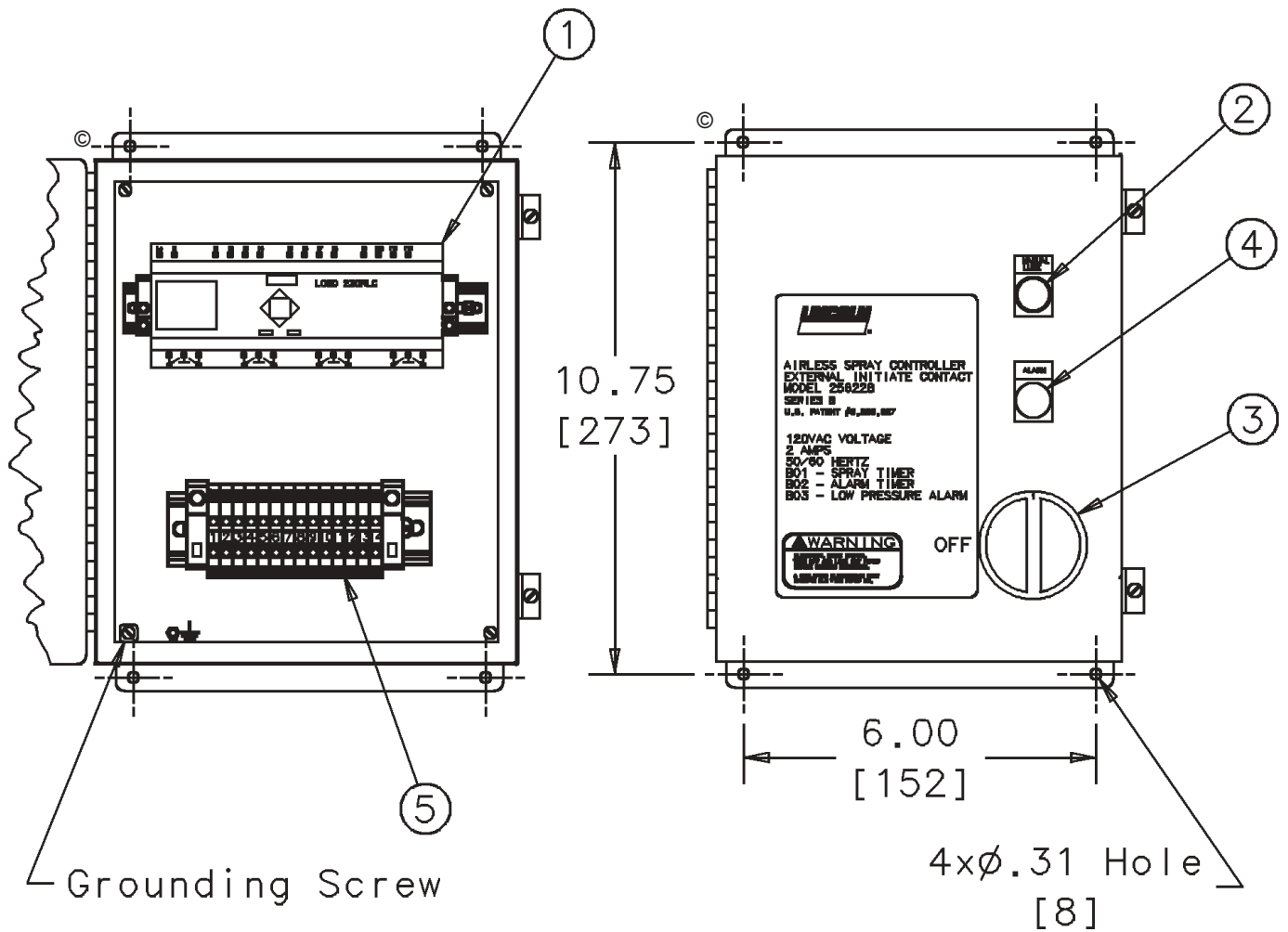
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5. To change a time parameter it must be displayed on the screen.

- a) press the **OK** key.
- b) using the **◀** or **▶** select the value to change.
- c) using the **▲** or **▼** change the value.
- d) when you have the desired value, press the **OK** key to accept the new value.
- e) press the **ESC** key until the original screen appears.

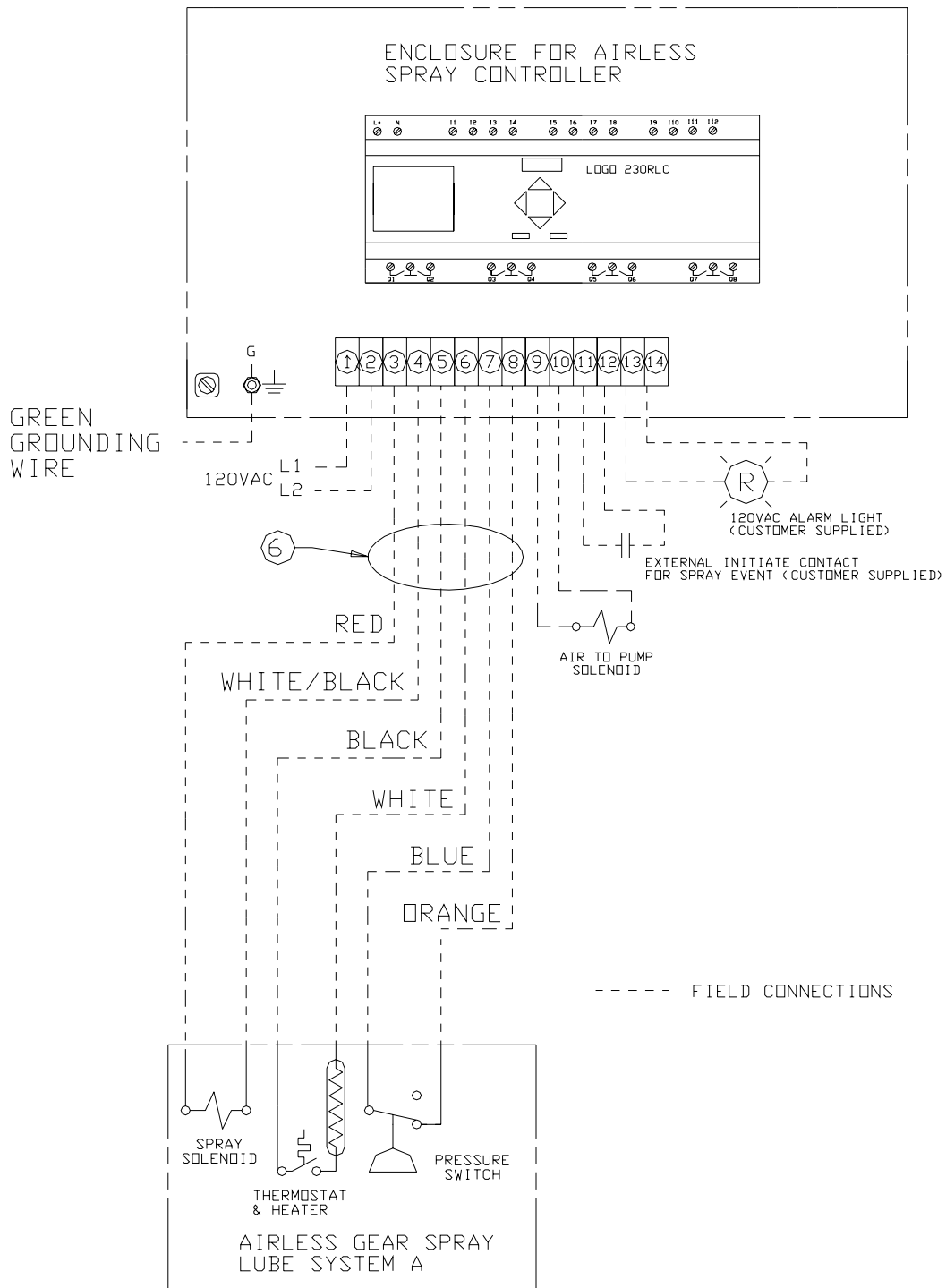


6. Pressing the **ESC** key will return you to the original screen.

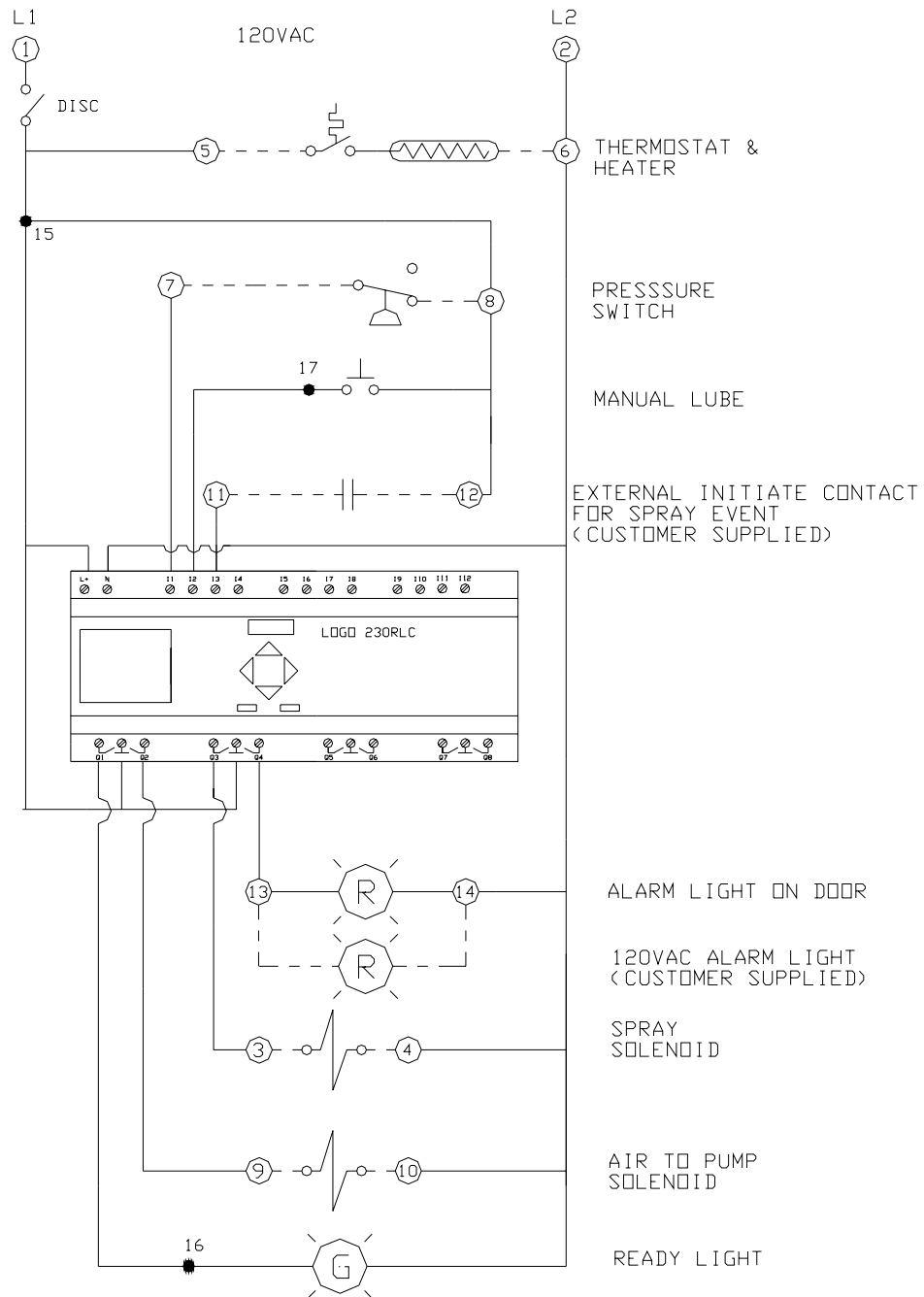


Service Parts			
Item	Part No.	Quan	Description
1	256237	1	PLC w/Program
2	256232	1	Green Ready Light/Manual Lube Push Button
3	256233	1	Disconnect Switch
4	256234	1	Red Alarm Light
5	256238	1	Terminal Block
6	256241	1	Cable Assembly (not shown, sold separately) ©

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**Field Wiring Diagram**



**Ladder Diagram**



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